

# **GENERAL CHEMISTRY**

Editor  
**Dr. Anil Bansal**

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**Editor By: Dr. Anil Bansal**

**Authored By: Sandhya Srivastava, Nidhi Vinod Singh,  
Udai Pratap Singh, Varsha Srivastava,  
Dr. Neetu Kumari, Dr. Anil K. Bansal,  
Dr. Vinod Mandal**

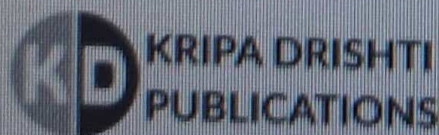
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Mob: +91-8007068688

Email: [editor@kdpublications.in](mailto:editor@kdpublications.in)

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## 5. The Analysis of Chemical Components of the Soap

**Dr. Neetu Kumari**

Assistant Professor,  
Department of Chemistry,  
University College of Science,  
Mohanlal Sukhadia University  
Udaipur.

### **Abstract:**

Soaps are evaluated based on their physicochemical characteristics, which determine their overall quality. Knowledge of soaps' physicochemical properties allows us to evaluate their efficacy and qualities. It was determined the pH, free caustic alkali, total alkali, total fat material, and moisture content of nine commercially available soaps using established analytical procedures. The range of values was 9.64%-21.06% for the moisture content, 0.00%-6.20% for the total alkali, 0.00%-0.99% for the free caustic alkali, 68.33%-100% for the total fat material, 9.69-10.13 for the pH of a 5% solution, and 9.63-10.32 for a 10% solution.

### **Keywords:**

Soap; Chemical Components; Soap Components; Physicochemical properties; Moisture content; pH; chemical analysis.

### **5.1 Introduction:**

Cleansing the body's natural oils or fats with sodium hydroxide or another powerful alkali, soap also contains fragrance and colorant for a pleasant bathing experience. It is without a doubt the case that soaps are crucial in the process of disinfecting and ridding the body of harmful germs and viruses. Soaps typically contain fats and oils with detergents to boost the soap's antibacterial activity. Between 85 and 85 % of bacteria on human skin can be eliminated with its use. There is a wide variety of bacteria found in a wide variety of environments, including faces, dirt, stagnant water, water, and the human body. The health consequences of bacterial infection are significant. The likelihood of contracting a skin infection is increased due to the accumulation of bacteria on the skin's surface, which is brought about by exposure to the environment. Bacteria like *Pseudomonas aeruginosa* and *Staphylococcus aureus* fall under this category. The spread of pathogens and viruses makes hand hygiene among medical professionals all the more crucial. Depending on the circumstances, it could be either pathogenic or opportunistic. Some soaps have been found to have antimicrobial agents that are more effective at killing bacteria and removing them from the body than regular soap.